

**DENTAL SURVEY OF INSTITUTIONALIZED CHILDREN IN SCARF FOUNDATION-  
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**ABSTRACT**

The objective of this survey was to describe the oral health status and dental treatment needs among mentally challenged institutionalized children residing in a rehabilitative centre, Schizophrenia Research Foundation (SCARF) in Chennai, India. The sample consisted of 75 children (47 males and 28 females) in the age group of 0 to 20 years from an institution in Chennai, India. Oral health status was assessed using modified WHO proforma, 2013 by a trained and calibrated dental examiner using ADA Type III examination. Among the subjects studied, about 49% had unmet dental treatment needs in which 25.6% had multiple carious tooth, 5.3% had single caries tooth, 4% had malocclusion and gingivitis respectively and 2.6% patients had notable bruxism habit. The present survey was helpful in providing baseline data which has been used for planning a comprehensive oral health care program for this vulnerable population.

**KEYWORDS:** Institutionalized children, mentally challenged, Oral health status, Dental survey, SCARF.**1. INTRODUCTION**

Individuals suffering from various disabilities, be it physical or mental, form a considerable population in any community. The psychological reactions associated with a deformity affects not only the disabled but their parents, caregivers and family members, which often can lead to the attitudes of hopelessness in the lives of these disabled individuals. The recent National Sample Survey Organization (NSSO) report suggests that the number of disabled persons in our country is estimated to be 18.49 million overall, which forms to about 1.8% of the total population of our nation and the mentally retarded population alone accounts to about 0.44 million individuals.<sup>[1]</sup>

Considering such low self-esteem and general hygiene maintenance of these mentally handicap children, their oral hygiene is no different and seems to be is extremely poor. Moreover, oral health is a part of the well-known concept of holistic health. It invariably affects one's appearance and aesthetics, skill of communication and phonetics and plays a pivotal role in maintaining self-confidence. However, the oral hygiene seems to be the most unattended health entity and in order to achieve betterment in self-esteem and self-confidence, prevention and treatment of these oral conditions is mandatory.

Society in Toto, has many mentally challenged persons, who find it hard to survive as their nutritional status is deficient and medical services are usually inadequate and neglected. When these specially challenged children go for dental treatments, it is important that their dentist can understand the patient's problems, natural history, general conditions and its complications on health. There has been inadequate information on the oral health status and dental treatment needs of the mentally disabled children.

Hence, the present survey was undertaken to assess the oral health status among 0-20-year-old children residing in a rehabilitation centre in Chennai, India.

**2. MATERIALS AND METHODS**

The present descriptive cross sectional survey was carried out among 75 mentally challenged individuals from SCARF Foundation in Chennai. SCARF is the acronym for the Schizophrenia Research Foundation, a non-governmental, non-profitable organization in Chennai, South India, founded in 1984 and is an established centre for rehabilitation and research in disorders of the mind. SCARF is named as a Collaborating Center of the World Health Organization (WHO) for Mental Health Research and Training.<sup>[2]</sup>

Informed consent of parents or guardians was obtained before screening was carried out on the subjects. The subjects were classified according to their medical diagnosis (Down syndrome, Autism and Cerebral palsy). The study was carried over a period of six months between June and December 2017. ADA Type III clinical examination using a mouth mirror and CPI probe and under natural light was carried out by an experienced dentist (SN) proficiently well trained with diagnosis of such conditions. The intra-examiner reliability was established by re-examination of 15 subjects (20% of the sample) that was 0.93. All aseptic precautions were carried out at the time of oral examination and sufficient number of instruments were taken during field visits. The children with simple treatment requirements such as

scaling and restoration of single tooth were provided treatment on-site using a portable dental unit and those requiring complex treatments were further referred to a tertiary dental care hospital situated in vicinity. Recorded data were transferred to Microsoft excel MacBook pro spread sheet and analysis was done for the frequency distributions.

**3. RESULTS**

Altogether 75 subjects were examined for their oral health status and needs assessment. The basic demographic details are depicted in Table I. The children had either down's syndrome, Autism or Cerebral Palsy as their clinical diagnosis.

**Table I: Age and Gender distribution in the study population.**

Age Distribution (in years)	Gender Distribution		TOTAL
	Number of Males	Number of Females	
0-5	13	6	19
6-10	27	16	43
11-15	6	6	12
16-20	1	0	1
TOTAL	47	28	75

**Table II: Frequencies of Oral manifestations in each of the clinical diagnosis.**

Neurological Diagnosis	Oral Manifestations						Total
	Normal	Multiple Carious Tooth	Single Dental Caries	Malocclusion	Gingivitis	Bruxism	
Down's Syndrome	15	11	2	2	0	1	31
Autism	18	8	0	1	2	1	30
Cerebral Palsy	5	4	2	0	1	0	12
NA	0	2	0	0	0	0	2
Total	38	25	4	3	3	2	75

From Table II it can be noted that almost 50.6% had no oral findings, 25.6% had multiple carious tooth, 5.3% had single caries teeth, 4% had malocclusion and gingivitis respectively and 2.6% had notable bruxism habit.

Out of 37 subjects who required treatment, three subjects underwent scaling and one subject underwent GIC restoration on site. The remaining 33 were referred to a nearby dental hospital for further treatment.

**4. DISCUSSION**

Oral health being an inevitable part of general health has a direct impact on an individual's well-being and functioning, and any oral disease will affect the overall quality of ones' life. Children with special needs belong to a vulnerable population for oral diseases and hence there is always a necessity for understanding their needs and in providing them with prompt treatments. In this survey, it is found that more than 50.6% of the subjects had no oral treatment needs, but the remaining 49.4% had unmet normative needs, that has to be promptly attended, which is similar to a study conducted by Subramaniam P et al, 2011 where nearly 48.8% children

where free of oral diseases.<sup>[3]</sup> Dental caries is the most prevalent disease among mentally retarded children worldwide<sup>[4]</sup> which is in strong contention with our present study (30.9%) and to another study conducted by KM Shivakumar et al, 2018.<sup>[5]</sup>

In a study conducted by Vishnu rekha et al, 2012<sup>[6]</sup> nearly 50% had gingivitis in both primary and permanent dentition, which is in contrast to our study where only 4% had gingivitis. Similarly, malocclusion was also reportedly high (70.5%), whereas in our study only 4% had malocclusion. In a study conducted by Gail William et al, 2004<sup>[7]</sup> bruxism was reported as a relatively common disorder, occurring in approximately 20% of surveyed children which is in contrast to our study findings where only 2% had bruxism. All these contrasting findings might be due to the fact that SCARF is an organization specially funded by Ministry of Science and Technology to provide quality oral and general health care.

The oral health is poor in this population as a result of low physical abilities with subsequent difficulties in maintaining oral hygiene, these individuals have poor

oral cleanliness and dental treatment is the greatest unattended health need of them. Oral health may be affected by limited understanding on the importance of oral health management<sup>[8]</sup>, socioeconomic status, underestimation of treatment need or pain among patients and care givers, inadequate recall systems, difficulties in communicating oral health needs<sup>[9]</sup>, anticonvulsant medications that impact on gingival health<sup>[10]</sup>, and a fear of treatment procedures.<sup>[11]</sup> Physical restraints and general anaesthesia are commonly used to treat adults with disabilities who have fear and communication difficulties related to oral health.<sup>[12]</sup> The oral health management of individuals with disabilities often depends on other people, such as parents or employees with assisted living services.<sup>[13]</sup>

### CONCLUSION

There is a high proportion of unmet treatment needs among institutionalized special children especially in terms of dental caries burden. This might reflect that there are barriers for accessing and utilizing dental service amidst them. Furthermore, economic considerations can be another limiting factor in this population that might further discourage the children and their caregivers from getting the treatment. Hence, concerned authorities should take necessary steps in improving the oral health of these children. Oral health promotion programs should be aimed specifically at special needs schools and parents of disabled children. Oral health promotion should include facilitating access and regular use of oral health services. Taking into consideration the multi factorial influence on oral health status of the present disabled population, oral health promotion and intervention programs should be targeted and concentrated towards these risk groups.

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### Conflicts of Interest

There are no conflicts of interest.

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